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NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 08/03/2009

J Paul Plummer ExxonMobil Upstream Research Company P O Box 2189 (CORP-URC-SW337) Houston, TX 77252-2189 EXAMINER
HUYNH, PHUONG
ART UNIT PAPER NUMBER

2857

DATE MAILED: 08/03/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,975	12/08/2005	Richard E. Duren	2003UR029	9586

TITLE OF INVENTION: PHASE CONTROL OF SEISMIC DATA

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	11/03/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

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If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

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III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where ar in m

appropriate. All further indicated unless correct maintenance fee notifica	correspondence including ted below or directed of attions.	ng the Patent, advance onerwise in Block 1, by (_			correspondence address as ate "FEE ADDRESS" for
CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)				Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.			
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	er ostream Research Co CORP-URC-SW337	I Si ac tr	hereby certify that the ates Postal Service of the Main Main Main and the Main Main Main Main Main Main Main Main	nis Fee(s with suf il Stop	s) Transmittal is being ficient postage for first ISSUE FEE address a 1) 273-2885, on the da	deposited with the United class mail in an envelope above, or being facsimile	
Houston, TX 77	252-2189		Γ				(Depositor's name)
			Γ				(Signature)
							(Date)
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTO)R	ATTO	RNEY DOCKET NO.	CONFIRMATION NO.
10/560,975	12/08/2005	•	Richard E. Duren			2003UR029	9586
TITLE OF INVENTION	N: PHASE CONTROL O	F SEISMIC DATA					
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nonprovisional	NO	\$1510	\$300	\$0		\$1810	11/03/2009
EXAM	MINER	ART UNIT	CLASS-SUBCLASS				
HUYNH,	PHUONG	2857	702-017000				
 Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required. 			(1) the names of up or agents OR, alterna (2) the name of a sin registered attorney o	of a single firm (having as a member a orney or agent) and the names of up to atent attorneys or agents. If no name is			
PLEASE NOTE: Un	lless an assignee is ident th in 37 CFR 3.11. Comp	A TO BE PRINTED ON ified below, no assignee pletion of this form is NO	data will appear on the	patent. If an assign n assignment.			cument has been filed for
Please check the appropri	riate assignee category or	categories (will not be p	rinted on the patent):	☐ Individual ☐ C	orporati	on or other private grou	p entity Government
4a. The following fee(s)	are submitted:	4	b. Payment of Fee(s): (Pl		ny prev	iously paid issue fee s	hown above)
Issue Fee	AT THE AMERICAN	200 15	A check is enclosed.				
	No small entity discount [# of Copies		☐ Payment by credit card. Form PTO-2038 is attached. ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number (enclose an extra copy of this form).				
5. Change in Entity Sta	atus (from status indicate	d above)	overpayment, to De	posit Account Numb	er	(enclose an	extra copy of this form).
_ 。 .	ns SMALL ENTITY statu	/	☐ b. Applicant is no le	onger claiming SMA	LL ENT	TITY status. See 37 CF	R 1.27(g)(2).
NOTE: The Issue Fee ar interest as shown by the	nd Publication Fee (if req records of the United Sta	uired) will not be accepte ttes Patent and Trademark	ed from anyone other than c Office.	the applicant; a reg	istered a	attorney or agent; or the	assignee or other party in
Authorized Signature				Date			
Typed or printed name				Registration 1	No		
This collection of inform an application. Confider submitting the complete this form and/or suggest Box 1450, Alexandria, V Alexandria, Virginia 22	ntiality is governed by 35 and application form to the cions for reducing this bu Virginia 22313-1450. DC	CFR 1.311. The informatic U.S.C. 122 and 37 CFR to USPTO. Time will vary rden, should be sent to the D NOT SEND FEES OR	on is required to obtain of 1.14. This collection is of depending upon the included the complete that the complete the complete process of the complet	r retain a benefit by estimated to take 12 lividual case. Any c icer, U.S. Patent and TO THIS ADDRES	the publ minutes omment Tradem S. SENI	ic which is to file (and to complete, including s on the amount of tim nark Office, U.S. Depan D TO: Commissioner fo	by the USPTO to process), gathering, preparing, and e you require to complete timent of Commerce, P.O. or Patents, P.O. Box 1450,

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

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J Paul Plummer			HUYNH, PHUONG		
	eam Research Compan	ART UNIT	PAPER NUMBER		
P O Box 2189 (CO Houston, TX 77252	*		2857 DATE MAILED: 08/03/200	9	

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 719 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 719 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 (571)-272-4200.

	Application No.	Applicant(s)				
	10/560,975	DUREN ET AL.				
Notice of Allowability	Examiner	Art Unit				
	DULIONG HUNAUL	2057				
	PHUONG HUYNH	2857				
The MAILING DATE of this communication appeal All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIOF of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in this ap or other appropriate communication IGHTS. This application is subject to	plication. If not included n will be mailed in due course. THIS				
1. This communication is responsive to <u>amendment filed on 0</u>	<u>05/14/2009</u> .					
2. The allowed claim(s) is/are <u>1-6</u> .						
3. ☐ Acknowledgment is made of a claim for foreign priority ura) ☐ All b) ☐ Some* c) ☐ None of the:	nder 35 U.S.C. § 119(a)-(d) or (f).					
 Certified copies of the priority documents have 	e been received.					
Certified copies of the priority documents have	been received in Application No	·				
3. Copies of the certified copies of the priority do	cuments have been received in this	national stage application from the				
International Bureau (PCT Rule 17.2(a)).						
* Certified copies not received:						
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		complying with the requirements				
4. A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give						
5. CORRECTED DRAWINGS (as "replacement sheets") mus	st be submitted.					
(a) ☐ including changes required by the Notice of Draftspers		-948) attached				
1) hereto or 2) to Paper No./Mail Date	•	- · · · , · · · · · · · · · · · · · · ·				
(b) ☐ including changes required by the attached Examiner's		Office action of				
Paper No./Mail Date	57 Americanione 7 Comment of in the C	Silico adderi di				
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).						
6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.						
Attachment(s) 1. ☐ Notice of References Cited (PTO-892)	5. ☐ Notice of Informal F	Patent Application				
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)	6. ☐ Interview Summary	• •				
	Paper No./Mail Da	te .				
3. Information Disclosure Statements (PTO/SB/08),	7. 🔲 Examiner's Amendr	ment/Comment				
Paper No./Mail Date 4.	8. 🛛 Examiner's Stateme	ent of Reasons for Allowance				
-	9.					
/Edward Raymond/						
Primary Examiner, Art Unit 2857						

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-6 are allowed.

The following is an examiner's statement of reasons for allowance (Applicant's argument filed on 05/14/2009 is persuasive):

Martinez (USPN. 4,646,274) discloses distortion in vibrator-type seismic records is corrected by measuring and using the actual ground force imparted by the source to develop an inverse filter. The ground force signal and the reflected seismic data are both subjected to the same deconvolution or other standard processing technique, thereby automatically filtering out flaws introduced by any such technique [see Martinez: Abstract; col. 2, line 55-col. 3, line 16; col. 4, lines 38-56].

Regarding claim 1, the closest prior art (Martinez) either singularly or in combination fails to anticipate or render obvious the combination wherein "after applying the first phase-control filter in (b), performing all subsequent processing steps on the phase-controlled seismic data, thereby transforming the seismic data into a version more representative of the subsurface region; and imaging physical structure of the subsurface region using the transformed seismic data" in combination with other limitations in the claims as defined by Applicant.

Application/Control Number: 10/560,975 Page 3

Art Unit: 2857

Claims 2-6 depend from allowed claim 1 and therefore are also allowed.

Conclusion

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUONG HUYNH whose telephone number is (571)272-2718. The examiner can normally be reached on M-F: 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ramos-Feliciano Eliseo can be reached on 571-272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/560,975 Page 4

Art Unit: 2857

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. H./ Examiner, Art Unit 2857 July 27, 2009 /Edward Raymond/

Primary Examiner, Art Unit 2857